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Tripartite Efficacy Profiles: A Cluster Analytic Investigation of Athletes’ Perceptions of Their Relationship With Their Coach

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Recent studies of coach–athlete interaction have explored the bivariate relationships between each of the tripartite efficacy constructs (self-efficacy; other-efficacy; relation-inferred self-efficacy, or RISE) and various indicators of relationship quality. This investigation adopted an alternative approach by using cluster analyses to identify tripartite efficacy profiles within a sample of 377 individual sport athletes ($M_{\text{age}} = 20.25, SD = 2.12$), and examined how individuals in each cluster group differed in their perceptions about their relationship with their coach (i.e., commitment, satisfaction, conflict). Four clusters emerged: High ($n = 128$), Moderate ($n = 95$), and Low ($n = 78$) profiles, in which athletes reported relatively high, moderate, or low scores across all tripartite perceptions, respectively, as well as an Unfulfilled profile ($n = 76$) in which athletes held relatively high self-efficacy, but perceived lower levels of other-efficacy and RISE. Multivariate analyses revealed differences between the clusters on all relationship variables that were in line with theory. These results underscore the utility of considering synergistic issues in the examination of the tripartite efficacy framework.

Keywords: conflict, efficacy measurement, other-efficacy, relationship commitment, RISE, self-efficacy

Athletes’ sporting endeavors are invariably supported (or thwarted) by their interactions with important social agents (e.g., coaches, teammates, parents) (e.g., Keegan, Spray, Harwood, & Lavallee, 2010). Accordingly, sport psychology researchers have displayed a longstanding interest in exploring the interpersonal processes that shape athletes’ behaviors and perceptions (e.g., Smith, Smoll, & Curtis, 1979; Smoll & Smith, 1989). Rooted in this pioneering work, the past decade has witnessed a proliferation of close relationship research in sport that has sought to examine numerous important dyadic exchanges. In particular, researchers have
devoted attention to various interpersonal settings, including coach–athlete (e.g., Jowett, 2007), parent–child (e.g., Bois, Sarrazin, Brustad, Chanal, & Trouilloud, 2005), and peer/teammate (Amorose, 2002; Smith, 2003) interactions. Although all of these influence athletic development in their own right, optimal relationships with coaches have been shown to facilitate numerous desirable outcomes for athletes. Beyond performance and motivational effects (e.g., Hollembeak & Amorose, 2005), coach–athlete exchanges may also be positively associated with athletes’ physical self-perceptions (Amorose, 2003; Jowett & Cramer, 2010), sport enjoyment (e.g., Stuntz & Spearance, 2010), self-esteem, and identity development (Coatsworth & Conroy, 2006, 2009), as well as prolonged sport participation (e.g., Pelletier, Fortier, Vallerand, & Brière, 2001).

By drawing from dyadic literature within romantic, familial, and friendship contexts, relationship researchers in sport have not only mapped out the numerous benefits of high-quality coach–athlete interactions, but they have also begun to articulate the behaviors, motives, and perceptions that promote or undermine harmonious dyadic enactment. For example, Rhind and Jowett (2010) outlined various maintenance behaviors (e.g., openness, positivity, support, advice) that underpin relationship stability. It has also been documented that positive perceptions of relationship satisfaction and interpersonal trust (e.g., Jowett, 2003) may support prolonged interactions, whereas high levels of conflict (actual and perceived) may play a role in relationship dissolution (e.g., Jowett, 2003). Over recent years, Jowett and her colleagues (see Jowett, 2007) have presented a series of investigations documenting how another group of constructs accounts for coach–athlete relationship quality, namely, individuals’ perceptions of commitment (i.e., relationship persistence intentions), closeness (i.e., strong affective bonds), and complementarity (i.e., reciprocal and cooperative behaviors).

Collectively, the literature in this area provides important insight into the mechanics (i.e., perceptions, behaviors) at the heart of optimal coach–athlete dyadic experiences. Armed with information regarding the factors that help coach–athlete relationships flourish (e.g., commitment, satisfaction, maintenance acts), researchers have begun to consider the diverse variables that predict these desirable processes (e.g., Coatsworth & Conroy, 2009; Lafrenière, Jowett, Vallerand, Donahue, & Lorimer, 2008). Lent and Lopez’s (2002) tripartite efficacy model, upon which we focus our attention in this study, represents one group of constructs that has demonstrated unique predictive capacity with respect to relationship perceptions. Couched within self-efficacy theory (Bandura, 1997), Lent and Lopez presented a conceptual model of efficacy beliefs originating uniquely within close relationship (e.g., coach–athlete) contexts. They proposed that dyadic interaction elicits the formation of a complementary set of efficacy beliefs, comprising an individual’s confidence in his own capabilities (i.e., self-efficacy), his confidence in the other person’s capabilities (i.e., other-efficacy), and his estimation of the other person’s confidence in him (i.e., relation-inferred self-efficacy, or RISE). To illustrate, in the context of coach–athlete dyads, Lent and Lopez’s proposals indicate that alongside an athlete’s beliefs in his own capabilities (self-efficacy), he also develops a degree of confidence in his coach’s ability (other-efficacy, e.g., “I’ve got a great coach”), as well as reflecting on how confident he thinks his coach is in his ability (RISE, e.g., “my coach doesn’t seem to think I’m up to the job”). Beyond offering detailed assertions regarding the origins of each of these beliefs, Lent and Lopez
Jackson, Gucciardi, and Dimmock posited that the efficacy constructs within their model are positively interrelated, as well as theorizing that in relational encounters, self-efficacy, other-efficacy, and RISE may each explain unique variance in diverse task- (e.g., motivation, effort, performance) and relationship-oriented outcomes (e.g., relationship commitment, satisfaction, perceptions of conflict and support).

Within coach–athlete settings, emerging qualitative (Jackson, Knapp, & Beauchamp, 2009) as well as cross-sectional (Jackson, Grove, & Beauchamp, 2010) and prospective (Jackson & Beauchamp, 2010) self-report studies have been conducted to examine the key tenets of Lent and Lopez’s (2002) framework. In addition to providing support for positive interrelationships between self-efficacy, other-efficacy, and RISE, these studies have collectively shown that each of the tripartite constructs align independently with perceived relationship functioning. For instance, self-efficacy beliefs have displayed significant predictive effects in relation to effort (Jackson & Beauchamp, 2010) and feelings of closeness (Jackson et al., 2010). Jackson and colleagues also reported that when individuals have a high degree of confidence in their dyadic partner (i.e., other-efficacy), they report enhanced relationship commitment, closeness, and satisfaction perceptions, as well high levels of effort and complementarity (see also Boardley, Kavussanu, & Ring, 2008; Myers, Wolfe, Maier, Feltz, & Reckase, 2006). Finally, qualitative data and coach self-report data have documented similarly positive findings for RISE beliefs with respect to relationship commitment and satisfaction (Jackson & Beauchamp, 2010; Jackson et al., 2010).

Despite presenting emerging evidence for the overall utility of Lent and Lopez’s (2002) framework, there are several ways in which tripartite efficacy research in coach–athlete settings may be advanced. In particular, while these first-generation coach–athlete dyadic studies have provided insight into the bivariate relationships within and between each of the efficacy beliefs and selected outcomes (e.g., self-efficacy and commitment, other-efficacy and commitment), researchers are yet to consider the various combinations of self-efficacy, other-efficacy, and RISE that may naturally exist in relational settings. In that respect, it would be worthwhile to examine (a) whether there is evidence of commonly recurring patterns within the network of self-efficacy, other-efficacy, and RISE beliefs, and (b) how these different patterns may align in unique ways with athletes’ relationship perceptions. For instance, do athletes who rate all the tripartite cognitions in a similarly positive light report more favorable relationship experiences than those who are confident in their own ability (self-efficacy), but at the same time lack confidence in their coach (other-efficacy) and also doubt their coaches’ confidence in them (RISE)?

Theoretical and empirical evidence exists to support the examination of synergistic patterns across individuals’ efficacy perceptions. From a conceptual standpoint, Lent and Lopez (2002) acknowledged the potential deleterious consequences arising from discrepancies between efficacy constructs, stating that “the extent to which . . . self-efficacy, other-efficacy, and RISE beliefs are harmonious and complementary (versus discordant) with one another may have important implications for each individual and their relationship” (p. 276). Lent and Lopez proposed specifically that despondency, disengagement, and frustration may result when individuals’ self-efficacy beliefs greatly exceed their other-efficacy or RISE perceptions. Similarly, when discussing the emergence of negative outcomes associated with strong other-efficacy beliefs in athlete–athlete dyads, Jackson
and colleagues (Jackson, Knapp, & Beauchamp, 2008) hypothesized that believing much more strongly in one’s partner’s capabilities (i.e., other-efficacy) than one’s own (i.e., self-efficacy) may lead to increased anxiety, as well as concerns about the longevity of one’s relationship. Despite these potential effects associated with discrepancies between efficacy constructs, there are no investigations to date assessing the existence of (and effects associated with) various patterns of tripartite perceptions.

Cluster analyses have been commonly employed in the past to classify homogeneous subgroups on the basis of various motivational constructs (Wang & Biddle, 2001), achievement goals (Hodge & Petlichkoff, 2000), mental toughness indices (Gucciardi, 2010), and peer/teacher relationship perceptions (Cox & Ullrich-French, 2010). In each of these cases, the researchers have illustrated how distinct cluster groupings may coincide in different ways with important indicators of functioning in that domain. Guided by this literature, the primary aim of this investigation was to identify the naturally occurring tripartite efficacy profiles within a sample of individual sport athletes, and also to examine how athletes in each of these emergent clusters differed across key relationship perceptions. We selected athletes’ ratings of their commitment to their coach, satisfaction with their coach, and perceived conflict with their coach as dependent variables, in light of the central role these constructs occupy in terms of overall relationship quality (e.g., Jowett, 2007). Though we were unable to formulate specific hypotheses due to the exploratory nature of the investigation, on the basis of theory (Lent & Lopez, 2002) and existing research (e.g., Jackson & Beauchamp, 2010; Jackson et al., 2010), we broadly anticipated that profiles characterized by consistently high levels of self-efficacy, other-efficacy, and RISE would display more positive relational perceptions than those clusters comprising individuals with less favorable or discordant efficacy beliefs.

In an effort to maximize the generalizability of these findings, and to overcome methodological limitations inherent in existing tripartite efficacy research, our primary aim was facilitated by two supplementary objectives. First, it is worth noting that the scope of existing research in this area (Jackson & Beauchamp, 2010; Jackson et al., 2010) is restricted as it has focused on a single athletic (i.e., tennis-only) context, thus providing limited insight (at best) into tripartite effects across other individual sport pursuits. As a result, in the current study we sought to gauge self-efficacy, other-efficacy, and RISE perceptions within a representative sample of athletes drawn from a variety of individual sporting domains (e.g., track and field, rowing, swimming, cycling).

In light of measurement concerns in previous studies, we also aimed to develop contextually relevant tripartite efficacy instruments with items specifically targeting individual sport athletes and their relationships with their coaches. Although existing tripartite research has demonstrated predictive effects with respect to outcome variables (e.g., Jackson & Beauchamp, 2010; Jackson et al., 2010), the efficacy instruments used to assess athletes’ self-efficacy and RISE perceptions have been limited insofar as they have relied on utilizing solely task-based self-efficacy scales (i.e., tennis self-efficacy; Barling & Abel, 1983). Despite displaying adequate psychometric properties, the items in Barling and Abel’s (1983) measure relate exclusively to athletes’ technical competencies during match play (e.g., “to play shots correctly,” “to hit passing shots”), and do not assess the various additional relationship-based tasks that are necessary for optimal interdependent functioning.
(e.g., communicating effectively, resolving conflict). Similarly, athletes’ confidence in their coaches’ ability (i.e., other-efficacy) has been measured using revised versions of existing instruments, such as the Coaching Efficacy Scale (Feltz, Chase, Moritz, & Sullivan, 1999), that are not specifically designed to assess coaching requirements unique to close dyadic interactions. In sum, previous studies have, at times, displayed a noticeable discord between the focus of efficacy items (i.e., performance-related capabilities such as serving and hitting passing shots) and criterion variables (i.e., relationship-oriented variables such as commitment and satisfaction), which may impair the ability to detect significant relationships and derive meaningful conclusions from the data (Bandura, 1997).

We sought to rectify existing measurement concerns by developing instruments suited to assessing tripartite efficacy perceptions held by individual sport athletes working with a coach. Specifically, via consultation with athletes we aimed to uncover the motivational, behavioral, emotional, and regulatory factors they believe are important for themselves (i.e., self-efficacy, RISE) and their coaches (i.e., other-efficacy) to build a successful partnership. To summarize, using domain-specific efficacy instruments, we aimed to identify tripartite efficacy profiles within a sample of athletes from various individual sports, as well as examining differences in key relationship perceptions (i.e., commitment, satisfaction, conflict) according to emergent tripartite profiles.

**Methods**

**Participants**

The sample comprised 377 athletes (M<sub>age</sub> = 20.25, SD = 2.12, age range = 17–27.75, 209 male, 168 female) recruited from various individual sports in Western Australia, namely, track and field (n = 99), tennis (n = 74), badminton (n = 31), rowing (n = 25), gymnastics (n = 39), cycling (n = 23), swimming (n = 48), and triathlon (n = 34). Four athletes did not report their sport. Participants were drawn from regional- (n = 219), university- (n = 69), and national-level (n = 89) competition, and reported a mean of 6.51 years experience in their sport (SD = 3.18). On average, athletes had worked with their current coach for 2.92 years (SD = 2.16), and spent 6.78 hr with their coach per week (SD = 3.89). All participants were active in competition at the time of questionnaire completion (i.e., were not injured or out of season).

**Measures**

**Efficacy Perceptions.** Athletes’ self-efficacy, other-efficacy, and RISE beliefs were measured using instruments developed for the current study, in line with existing recommendations for constructing efficacy scales (Bandura, 2006). Specifically, before addressing our primary research questions, a three-stage process was employed to develop domain-specific measures that assessed a range of relevant behavioral, cognitive, and emotional factors. In Stage 1, we recruited a group of male (n = 29, M<sub>age</sub> = 19.47, SD = 2.02) and female athletes (n = 20, M<sub>age</sub> = 18.84, SD = 1.34), separate from those in the main sample but representing a similar range of regional- and university-level individual sports (i.e., tennis, track and field, gymnastics, badminton, and swimming). These athletes completed an
open-ended questionnaire, in which they were first asked to list “the main skills/tasks required of an athlete in order to build a successful partnership with a coach” in their sport. Athletes were instructed (a) that a “successful partnership is characterized not only by high performance in competition but also by the athlete and coach working well together as a pair” and (b) to consider all the relevant physical, technical, mental, and relationship-oriented tasks/skills that they believed contributed to optimal functioning. Following this process, athletes were asked to repeat the same procedure (with the same prompts), this time considering “the main skills/tasks required of a coach in order to build a successful partnership with an athlete” in their sport. On both occasions, respondents were encouraged to reflect upon “the things that are really important for an athlete or a coach, but are not always easy to do” to enable a sufficiently challenging range of items to emerge (Bandura, 2006).

In Stage 2, all responses were coded by the first author, and were inspected to identify recurring themes for athlete and coach tasks/skills. In total, 24 and 28 distinct self- and coach-related themes were identified, respectively. Emergent themes not only comprised intrapersonal requirements for athletes (e.g., technical competencies, physical conditioning) and coaches (e.g., maintaining expert knowledge), but also included a number of important interpersonal factors necessary for athletes (e.g., communicate effectively, play a role in conflict resolution) and coaches (e.g., providing support, clarifying expectations) to function effectively in their relationship. The most frequently occurring athlete tasks/skills were then used to formulate items for the self-efficacy and RISE measures, and the coach tasks/skills formed the basis of the other-efficacy instrument. For self-efficacy/RISE, 17 of the 24 total themes were cited by over 32% (i.e., at least 16) of the athletes, whereas the remaining seven themes were each described by less than 10% of participants. Similarly, 19 of the total 28 other-efficacy themes were each cited by over 36% (i.e., at least 18) of the athletes, while the remaining nine items were each cited by less than 13% of respondents. Based on these responses, an initial pool of 17 items was developed for the self-efficacy/RISE scales, and 19 items were designed to assess other-efficacy.

In Stage 3, these initial items were presented to a group of efficacy/dyad researchers (n = 4; one professor; three associate professors) as well as university-level individual sport athletes (n = 7), along with definitions of each of the focal constructs. To examine content validity, athletes were asked to provide qualitative feedback on items, focusing specifically on relevance, jargon, understanding, and replication. To also obtain quantitative insight (as well as providing qualitative feedback), experts were asked to rate the relevance of each item using a 5-point scale anchored at –2 (very poor) and 2 (very good) (see Haynes, Richard, & Kubany, 1995). Given the limited number of expert reviewers, items were eliminated in instances where mean or median scores fell below 1.0 (cf. Kavussanu & Boardley, 2009). As a result, three self-efficacy/RISE items (trust your coach’s feedback, remain calm in difficult situations, be honest with your coach) were eliminated, and five further items underwent revision as a result of expert/athlete comments, resulting in a final pool of 14 items (see Appendix A). For other-efficacy, four items with mean or median reviewer scores < 1.0 were removed (be approachable for discussion, listen to your feedback, remain calm in difficult situations, demonstrate all the skills in your sport), and a further four underwent minor revisions as
a result of qualitative feedback from athletes and expert reviewers, resulting in a final 15-item instrument (see Appendix B).

To operationalize athlete self-efficacy, the list of 14 items was presented following the instruction, “at this point in time, rate your confidence in your ability to . . .” Although Bandura (2006) recommends an 11-point rating scale for measuring efficacy beliefs (e.g., 0–10), recent research in sport has provided support for condensed response formats (Myers, Wolfe, & Feltz, 2005). Accordingly, athletes in the current study were asked to rate their confidence in their ability on a 5-point scale, ranging from 1 (no confidence at all) to 5 (complete confidence). For other-efficacy, athletes were instructed, “at this point in time, rate your confidence in your coach’s ability to . . .” followed by the 15 coach-related items. Finally, to assess RISE beliefs, exactly the same 14 items were used as in the self-efficacy measure, but this time athletes were asked, “at this point in time, estimate how confident your coach is in your ability to . . .” The rating scales for other-efficacy and RISE were identical to those employed for self-efficacy. Each of the three tripartite efficacy measures displayed adequate psychometric properties (see Results section).

**Relationship Commitment.** Individuals’ commitment to their relationship with their coach was assessed with a four-item instrument that has been used in previous dyadic sport research (e.g., Jackson & Beauchamp, 2010). Originally revised from Scanlan and colleagues’ (Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993) sport commitment scale, example items in this measure included, “how dedicated are you to your relationship with your coach?” and “what would you be willing to do to keep your relationship going with your coach?” Ratings were made on a five-point scale, anchored at 1 (not at all/nothing) and 5 (very/a lot), and respondents were instructed to rate their commitment at “this point in time.” Previous research has provided support for the unidimensionality (e.g., Scanlan et al., 1993) and concurrent validity of this instrument, demonstrating favorable correlations with conceptually relevant variables (e.g., relationship satisfaction, Jackson & Beauchamp, 2010).

**Satisfaction With One’s Coach.** Two subscales from the Athlete Satisfaction Questionnaire (ASQ; Riemer & Chelladurai, 1998) were used to obtain insight into athletes’ satisfaction regarding their relational interactions with their coach, as well as the task direction provided by their coach. The “personal treatment” (PT) subscale (comprising five items) measures individuals’ satisfaction with various coaching behaviors, including “the recognition I receive from my coach,” “the friendliness of the coach towards me,” and “the level of appreciation my coach shows when I do well.” The three-item “training and instruction” (TI) subscale from the ASQ assesses athletes’ satisfaction with the training and instruction provided by their coach, including, “the instruction I have received from my coach this season,” and “the training I receive from my coach during the season.” In responding to these statements, athletes were asked to “consider your feelings at this moment in time,” and rated their satisfaction from 1 (not at all satisfied) to 7 (extremely satisfied). When presenting their measure, Riemer and Chelladurai (1998) documented evidence for the structural properties, criterion-related validity, and subscale reliability of the ASQ.
**Conflict.** Athletes rated their perceptions of conflict with their coach using a modified version of the conflict subscale from Pierce and colleagues’ Quality of Relationships Inventory (QRI; Pierce, Sarason, Sarason, Solky-Butzel, & Nagle, 1997). This scale comprised six items, including “how often do you need to work hard to avoid conflict with your coach?,” “how much do you argue with your coach?,” and “how much would you like your coach to change?” Responses were scored on a four-point scale from 1 (*not at all*) to 4 (*very much*), where higher scores indicated greater perceived conflict. For consistency, respondents were again instructed to “respond to the following statements according to how you feel at this moment in time.” Adequate psychometric properties for this sport-specific instrument have been documented previously (Jowett, 2009).

**Procedure**

Having obtained ethical approval, an information letter was mailed to governing bodies of individual sports, who were asked to provide contact details for coaches/ clubs associated with regional, university, and national competitors. Upon contacting coaches/club secretaries, information was presented about the study and a suitable time was arranged for the investigator to visit a training session to discuss the project with athletes. At the beginning of a training session (before warm-up and any instruction from the coach), the investigator explained the requirements of the study to athletes. Participants were also informed that all data would remain confidential at all times, that they were free to choose not to participate, and that they may withdraw at any time without prejudice. In addition, athletes were reassured verbally and in writing that their coach would not be made aware of any of their responses at any time. Having provided their informed consent, respondents completed the questionnaire privately over a period of approximately 10 min. All participants were thanked for their time following completion of the questionnaire, and were invited to ask any questions they wished pertaining to the study.

**Data Analysis**

Before computing descriptive statistics, correlations, and cluster analyses, we created a random split in the dataset that allowed us to examine the psychometric properties of each of the efficacy scales using exploratory (*n* = 150) followed by confirmatory (*n* = 227) factor analytic techniques. Before conducting analyses, we ensured that both random samples were representative in terms of gender, sport type, and level of competition. To obtain initial exploratory insight into the underlying factor structure of the self-efficacy, other-efficacy, and RISE instruments (i.e., unidimensional vs. multidimensional), principal components analyses were performed in SPSS. Factor extraction at this stage was determined by eigenvalues > 1.0 accompanied by visual inspection of scree plots. Subsequently, we were guided by these initial factor solutions when specifying the number and structure of latent variables and indicators with the remaining cases, using maximum likelihood factoring procedures in AMOS (i.e., confirmatory analyses). In line with existing recommendations, several indices were used to estimate overall model fit (Hu & Bentler, 1999). As well as the $\chi^2$ goodness-of-fit index, we also employed other traditional criteria, namely, the normed $\chi^2$ (i.e., $\chi^2/df$), the comparative fit
index (CFI), the incremental fit index (IFI), the Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA) (see Tabachnick & Fidell, 2007). Values for CFI, IFI, and TLI $\geq .90$, and RMSEA $\leq .08$ (with the 90% confidence interval upper bound $\leq .10$) were used as indicators of adequate fit (Browne & Cudeck, 1992; Tabachnick & Fidell, 2007), with CFI, IFI, and TLI $\geq .95$, RMSEA $\leq .06$, and $\chi^2/df \leq 3$ as evidence of good fit (Hu & Bentler, 1999). In light of existing evidence regarding the dimensionality of the remaining instruments used in this investigation (i.e., commitment, satisfaction, conflict), we employed confirmatory analyses across the whole sample (i.e., $N = 377$) to estimate model fit for these measures before computing cluster analyses.

Hierarchical and nonhierarchical cluster analyses were subsequently conducted using a two-step process recommended (Hair, Black, Babin, & Anderson, 2010) and commonly employed in the literature (e.g., Cox & Ullrich-French, 2010; Gucciardi, 2010). The clustering variables were self-efficacy, other-efficacy, and RISE. Raw scores were used because all clustering variables shared the same metric (i.e., a 5-point Likert scale). First, a hierarchical cluster analysis using Ward’s linkage method with the squared Euclidian distance measure was performed to identify the optimal number of clusters (see Aldenderfer & Blashfield, 1984; Hair et al., 2010). In the second stage, k-means (nonhierarchical) cluster analysis using simple Euclidean distance as the similarity measure was conducted, specifying the most appropriate cluster solution indicated in Stage 1. Finally, having established that our data conformed to relevant statistical assumptions (i.e., univariate and multivariate normality, homogeneity of variance), we performed a series of multivariate analyses of variance (MANOVAs), with demographic variables and athletes’ relationship perceptions (i.e., commitment, satisfaction, conflict) entered as dependent variables, to explore differences between cluster groups. In these analyses, a significant multivariate effect was followed up with post hoc analyses of group means using an adjusted $p$ value (0.01) to guard against inflation of Type I error rates as a result of multiple comparisons.

### Results

**Psychometric Properties of Primary Measures**

**Efficacy Constructs.** Principal components analyses with the first subsample of participants ($n = 150$) revealed that all 14 self-efficacy items loaded onto a single factor (variance explained = 58.64%; eigenvalue = 8.19; all factor loadings $> .60$). Analyses also indicated that all 15 other-efficacy (variance explained = 69.39%; eigenvalue = 10.60; all factor loadings $> .65$) and 14 RISE items (variance explained = 63.65%; eigenvalue = 9.41; all factor loadings $> .64$) displayed unidimensional factor structures. For the remaining subsample of participants ($n = 227$), fit indices were estimated for a three-factor measurement model, in which self-efficacy, other-efficacy, and RISE were specified as correlated, unidimensional latent variables. Fit indices for this model were acceptable, $\chi^2 (857) = 1466.57$, $p < .001$, $\chi^2/df = 1.71$, CFI = .94, IFI = .94, TLI = .93, and RMSEA = .056 (90% confidence interval .050–.062). Correlations observed between self-efficacy and other-efficacy ($r = .57$), self-efficacy and RISE ($r = .70$), and other-efficacy and RISE ($r = .69$) indicated that these latent variables were positively related yet distinguishable constructs. Estimates of internal consistency with this subsample were also acceptable for
self-efficacy ($\alpha = .86$), other-efficacy ($\alpha = .89$), and RISE ($\alpha = .87$). Guided by evidence of unidimensionality, a single mean score was computed for each of the tripartite constructs for use in all subsequent analyses.

**Relationship Perceptions.** Fit indices revealed that all four indicators of relationship commitment loaded adequately onto a single latent variable, $\chi^2 (2) = 7.46, p = .01, \chi^2/df = 3.73, CFI = .96, IFI = .96, TLI = .94$, and RMSEA = .080 (90% confidence interval .05–.11). Model fit for satisfaction items was estimated using a two-factor model in which PT and TI were specified as correlated latent variables. Analyses indicated good overall fit for the proposed two-factor structure, $\chi^2 (19) = 60.73, p < .001, \chi^2/df = 3.20, CFI = .95, IFI = .95, TLI = .93$, and RMSEA = .076 (90% confidence interval .055–.098). Finally, all six conflict items also loaded adequately onto a single latent variable, $\chi^2 (9) = 34.99, p < .001, \chi^2/df = 3.89, CFI = .96, IFI = .96, TLI = .95$, and RMSEA = .088 (90% confidence interval .068–.108). Acceptable internal consistency estimates were observed for commitment ($\alpha = .90$), both forms of satisfaction (both $\alpha = .88$), and conflict ($\alpha = .84$).

**Descriptive Statistics**

Missing data (comprising 0.3% of the original data file) were replaced using the expectation-maximization method (see Graham, 2009). Normality checks on all items for skewness (values ranged from −.63 to .40) and kurtosis (values ranged from −.98 to −.25) revealed that none of the data violated assumptions of normality (Tabachnick & Fidell, 2007). Z-scores were computed for efficacy perceptions to check for univariate outliers ($z > \pm 3$), and multivariate outliers for tripartite beliefs were examined with Mahalanobis distance set at $p < .001$ (Tabachnick & Fidell, 2007). No univariate outliers were detected, and no cases exceeded the tolerance limit for multivariate normality. Descriptive statistics for demographic, efficacy, and relationship perceptions are presented in Table 1 for the whole sample (i.e., before clustering). Mean scores for tripartite constructs and relationship perceptions were moderately high and were largely consistent with trends observed for athletes in previous research (e.g., Jackson & Beauchamp, 2010).

Given the range of sports and competitive levels represented, a MANOVA was performed with tripartite efficacy perceptions entered as dependent variables, along with sport type and competitive level entered as the independent factors. No significant multivariate effects emerged for sport type ($F_{21, 996} = .96, p = .51, \eta^2_p = .02; \lambda = .94$), indicating that there were no significant differences in self-efficacy, other-efficacy, or RISE across the various sports. A significant multivariate effect was observed for competitive level ($F_{6, 694} = 2.49, p = .02, \eta^2_p = .02; \lambda = .96$); however, follow-up analyses with adjusted significance levels ($p = .01$) revealed no differences on self-efficacy ($F_{2, 373} = 3.452, p = .03, \eta^2_p = .02$), other-efficacy ($F_{2, 373} = 2.16, p = .12, \eta^2_p = .01$), or RISE ($F_{2, 373} = 1.35, p = .26, \eta^2_p = .01$) across regional-, university-, and national-level competitors. Pearson correlations, computed across the whole sample (see Table 2), revealed that self-efficacy, other-efficacy, and RISE beliefs were positively interrelated. That is, individuals who were highly confident in their own ability tended to also report high confidence in their coach and favorable estimations of their coach’s confidence in them. High scores on each of the tripartite constructs were also associated with desirable relationship perceptions (i.e., high commitment and satisfaction, low conflict).
Table 1  Demographic Variables, Tripartite Efficacy Beliefs, and Relationship Perceptions for the Whole Sample as Well as Each Cluster Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>Whole Sample (N = 377)</th>
<th>High (n = 128)</th>
<th>Moderate (n = 95)</th>
<th>Low (n = 78)</th>
<th>Unfulfilled (n = 76)</th>
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<td>Clustering Variables</td>
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<td>Self-efficacy</td>
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Note. Self-efficacy, other-efficacy, RISE, commitment measured 1–5, and satisfaction 1–7, where higher scores indicate more positive perceptions. Conflict was measured 1–4, with higher numbers indicating increased conflict. Satisfaction (PT) = satisfaction with personal treatment. Satisfaction (TI) = satisfaction with training and instruction. Cluster differences on demographic and relationship variables are illustrated across rows with superscript letters, where the same letter indicates no significant difference between clusters (e.g., Low and Unfulfilled athletes did not differ on commitment, but both differed from Moderate athletes, who in turn differed from High athletes). For relationship length, High and Low athletes were significantly different, but Moderate and Unfulfilled athletes did not differ from one another or from High or Low athletes.
Table 2  Zero-Order Correlations Among Demographic Variables, Tripartite Efficacy Beliefs, and Relationship Perceptions for the Whole Sample (N = 377)

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Note. Satisfaction (PT) = Satisfaction with personal treatment. Satisfaction (TI) = Satisfaction with training and instruction. For conflict, higher scores represent more negative perceptions (i.e., greater conflict). Thus, negative correlations indicate that higher efficacy beliefs were associated with lower levels of conflict.

* *p < .05, ** *p < .01, *** *p < .001.
Cluster Analyses

In Stage 1 of our analyses (i.e., hierarchical), although we explored two-, three-, four-, and five-cluster solutions, the agglomeration coefficient and dendrograms suggested that a four-cluster solution was the most appropriate. Accordingly, we specified a four-cluster solution in our Stage 2 (i.e., k-means nonhierarchical) analyses. The nonhierarchical procedures provided support for the hierarchical analyses because the final centroids were similar to the initial seed points. Having independently performed these analyses, similar results were obtained by the first and second authors (κ = .98), supporting the reliability of the emergent solution. Mean data for demographic and focal variables according to each cluster are presented in Table 1. The first cluster was labeled High (n = 128; 34% of the sample; male = 71, female = 57), as athletes in this cluster evidenced consistently high levels across self-efficacy, other-efficacy, and RISE perceptions. The second cluster was labeled Moderate (n = 95; 25% of the sample; male = 52, female = 43), as these participants displayed relatively moderate levels on all the tripartite constructs. In the third cluster, which was labeled Low (n = 78; 21% of the sample; male = 40, female = 38), athletes evidenced relatively low perceptions for self-efficacy, other-efficacy and RISE. These cluster labels (i.e., High, Moderate, Low) were assigned in light of the tripartite perceptions that athletes reported in relation to those from other subgroups.

In contrast to the previous clusters where tripartite perceptions were relatively concordant, athletes in the fourth cluster, labeled Unfulfilled (n = 76; 20% of the sample; male = 46, female = 30), were highly self-efficacious but at the same time reported lower levels of other-efficacy (i.e., confidence in their coach) and RISE (i.e., estimated their coach was not as confident in them as they were themselves). A MANOVA detected a significant multivariate effect of cluster membership on the three efficacy constructs (F_{9, 904} = 250.21, p < .001, η_p^2 = .64; λ = .05). Follow-up analyses of variance (ANOVAs) revealed a significant effect of cluster membership on all three efficacy indices: self-efficacy (F_{3, 373} = 391.59, p < .001, η_p^2 = .76); other-efficacy (F_{3, 373} = 643.95, p < .001, η_p^2 = .84); and RISE (F_{3, 373} = 514.72, p < .001, η_p^2 = .80). All potential post hoc group comparisons were significant at the p < .001 level for all three efficacy beliefs.

Cluster Group Differences on Demographic Variables and Relationship Perceptions

ANOVA was employed to ascertain if age differences existed between the emergent cluster groups. An alpha level of 0.05 was used, with partial eta squared providing an index of effect size. No significant differences in age were revealed between the four emergent clusters (F_{3, 373} = 1.84, p = .14, η_p^2 = .01). Two separate MANOVAs were then computed to determine if cluster group differences existed on demographic variables and/or focal relationship perceptions. In the first MANOVA, we examined differences on sport experience, relationship length, and the number of hours spent together according to cluster group membership (age was examined separately due to near-zero correlations with all of these other demographic variables). Analyses revealed a significant multivariate effect of cluster membership (F_{9, 903} = 4.83, p < .001, η_p^2 = .04; λ = .89), with relationship length (F_{3, 373} = 5.86, p < .001, η_p^2 = .05) and experience (F_{3, 373} = 11.33, p < .001, η_p^2 = .08) but not hours
spent together ($F_{3,373} = 2.77, p = .04, \eta^2_p = .02$) contributing to the outcome. With regards to relationship length, post hoc analyses detected a significant difference between the High and Low clusters ($p < .001$), whereby High cluster athletes had significantly longer relationships with their coach than those in the Low cluster; all other comparisons were nonsignificant. Post hoc analyses revealed a significant difference between the Low cluster and both the High and Unfulfilled clusters ($p < .001$), as well as between the Moderate cluster and both the High ($p < .01$) and Unfulfilled clusters ($p < .01$) on sport experience, with the High and Unfulfilled clusters reporting the greatest experience. There were, however, no significant differences in experience between either the High and Unfulfilled clusters, or the Moderate and Low clusters.

In the second MANOVA, relationship commitment, satisfaction with the coach’s personal treatment as well as training and instruction, and perceptions of conflict were entered as dependent variables. The MANOVA showed a significant multivariate effect of cluster membership ($F_{12, 979} = 70.39, p < .001, \eta^2_p = .42; \lambda = .19$), with commitment ($F_{3, 373} = 278.33, p < .001, \eta^2_p = .69$), satisfaction (PT) ($F_{3, 373} = 159.53, p < .001, \eta^2_p = .56$), satisfaction (TI) ($F_{3, 373} = 112.44, p < .001, \eta^2_p = .47$), and conflict ($F_{3, 373} = 55.13, p < .001, \eta^2_p = .30$) all contributing to the outcome. With regards to commitment, post hoc analyses detected a significant difference between the High cluster and each of the other clusters (all $p < .001$). Athletes in the Moderate cluster were also more committed than those in the Low and Unfulfilled clusters (both $p < .001$); however, athletes in the Low and Unfulfilled clusters did not differ significantly. In terms of athletes’ satisfaction with the personal treatment they received from their coach, follow-up analyses indicated that the High and Moderate groups were both significantly more satisfied than the Low and Unfulfilled groups (all $p < .001$), although there were no significant differences between the High and Moderate clusters, or between the Low and Unfulfilled clusters. Post hoc analyses for athletes’ satisfaction with training and instruction displayed exactly the same pattern. That is, the High and Moderate clusters did not differ on satisfaction (TI), but members of both these clusters were more satisfied than those in both the Low and Unfulfilled clusters ($p < .001$). Again, no differences emerged between the Low and Unfulfilled clusters. Finally, for conflict, analyses revealed that the High cluster perceived lower conflict than all other cluster groups (all $p < .001$). No differences emerged between the Low and Moderate clusters. However, the Unfulfilled cluster perceived greater conflict than all other clusters (Low, $p = .001$; Moderate and High, $p < .001$).

**Discussion**

Although researchers have begun to establish a number of independent predictive effects for Lent and Lopez’s (2002) tripartite efficacy beliefs, evidence for the way in which these constructs combine with one another in the form of profiles (or clusters) is lacking. This study sought to identify the various naturally occurring tripartite efficacy patterns held by individual sport athletes, as well as examining salient relationship perceptions (i.e., commitment, satisfaction, conflict) that accompanied each cluster. Overall, our findings indicated that athletes could be classified into one of four profiles according to the relative composition of their
self-efficacy, other-efficacy, and RISE beliefs. In three of these clusters, tripartite perceptions were largely concordant with one another and were all either relatively High, Moderate, or Low in magnitude. Despite being relatively confident in their own ability, individuals in the fourth emergent profile (i.e., Unfulfilled athletes) displayed a somewhat discordant network of efficacy perceptions by reporting lower other-efficacy and RISE beliefs.

The three clusters in which tripartite perceptions were relatively congruent (i.e., High, Moderate, Low) provided support for a number of theoretical propositions. First, it was noteworthy that the vast majority of athletes fell into one of these categories (n = 301, 80% of the whole sample), which not only substantiated Lent and Lopez’s (2002) contention that self-efficacy, other-efficacy, and RISE beliefs are closely interrelated, but also validated positive correlational findings reported between these constructs in previous studies (e.g., Jackson & Beauchamp, 2010). Second, large effect sizes within our multivariate analyses revealed support for the utility of these clusters in that profiles were characterized by relatively consistent differences on relationship perceptions. Lent and Lopez asserted that these efficacy beliefs represent adaptive social cognitions that bolster one’s relational experiences. Although these cross-sectional data preclude us making any causal deductions, athletes displaying High levels of self-efficacy, other-efficacy, and RISE did indeed report the most favorable relationship perceptions, whereas those athletes in the Low cluster were principally oriented toward less desirable evaluations. Members of the High cluster exhibited (a) higher commitment than those in the Moderate and the Low clusters, (b) higher scores on both indices of satisfaction than Low cluster athletes, and (c) lower perceptions of conflict than those in the Moderate and Low clusters. Despite a somewhat mixed pattern for individuals in the Moderate cluster (i.e., not significantly different from Low athletes on conflict, or from High athletes on satisfaction), taken at a global level the relationship perceptions held by these athletes appeared to be more adaptive than for those in the Low cluster, but less adaptive than for those in the High cluster.

There were also interesting demographic differences apparent between these clusters. In particular, High efficacy athletes had longer relationships with their coaches than those in the Low cluster and greater experience in comparison with both Moderate and Low cluster athletes. Extensive sport experience and relationship longevity may provide increased opportunities to accumulate individual and dyadic mastery experiences, and may contribute to the formation of adaptive efficacy perceptions (Bandura, 1997; Jackson et al., 2009). With this in mind, it would be interesting in future to track whether (and how) athletes progress between these profiles over time, to map changes in one’s efficacy cluster against developments in demographic variables, as well as exploring other potential contributory factors, such as performance attainments.

In contrast to the aforementioned clusters, the remaining athletes in this study were classified as Unfulfilled; displaying a discordant pattern of perceptions typified by relatively strong self-efficacy beliefs alongside weaker other-efficacy and RISE beliefs. That is, while these Unfulfilled individuals were confident in their own ability, they rated their coaches’ capabilities (i.e., other-efficacy) and their coaches’ confidence in their ability (i.e., RISE) less favorably. This type of profile appears to contradict Lent and Lopez’s (2002) proposals regarding the interrelationships between the tripartite constructs, and it is important to consider the potential
mechanisms that may account for the perceptual disconnect between self-efficacy and “relational” efficacy (i.e., other-efficacy and RISE) beliefs in this cluster. There are a number of prominent social psychological concepts that may help to explicate these findings. Clearly though, our data do not provide any insight into the formative processes underpinning the Unfulfilled profile. That being the case, we present these concepts only as potential explanations (rather than data-driven interpretations), which would necessitate future investigation.

Attachment theory (Bowlby, 1969) represents one framework that has consistently shown to be implicit in the formation of interpersonal perceptions. Attachment orientations symbolize relatively stable and persistent dispositions, formed during infant interactions with caregivers, that predispose individuals to certain relational beliefs and expectations throughout the lifespan (see Carr, 2009, for a sport-related discussion). Of particular interest, individuals who develop an insecure (e.g., avoidant, anxious-ambivalent) attachment style tend to display diminished trust in others and increased interpersonal anxiety, along with reduced feelings of closeness and connectedness in their relationships (e.g., Feeney & Noller, 1990). One possibility, therefore, is that despite being a group of relatively experienced athletes (which may contribute to a strong sense of one’s own capabilities), these Unfulfilled individuals carry maladaptive attachment orientations that promote insecure appraisals of significant others (e.g., a lack of confidence in a coach, and lowered evaluations of the coach’s confidence in their ability). It would be intriguing in future to test these proposals and examine the role of attachment styles in the development of tripartite efficacy profiles.

There are additional related concepts that may also give rise to suboptimal perceptions about others’ capabilities (i.e., other-efficacy) and cognitions (i.e., RISE). For example, it would be interesting to explore profile formation on the basis of the specific type of relational schema that individuals hold regarding the behaviors they expect from others (Baldwin, 1992), as well as individuals’ tendencies to anticipate, perceive, and overreact to interpersonal rejection (i.e., “rejection sensitivity,” Downey & Feldman, 1996). Those who score highly on rejection sensitivity, for instance, have been shown to develop less favorable interpretations of ambiguous behavioral cues from others, in the form of reduced perceptions of support, and increased disillusionment, isolation, and dissatisfaction (e.g., London, Downey, Bonica, & Paltin, 2007).

Aside from the intrapersonal processes that may underpin the formation of an Unfulfilled profile, this cluster of efficacy perceptions may also develop, in part, due to one or more coach-related factors. For instance, Jackson et al. (2009) reported that inappropriate or undesirable coaching styles and behaviors (e.g., verbal and nonverbal communication) may be associated with unfavorable other-efficacy and RISE perceptions. It is possible that despite believing in their own ability, athletes may lose confidence in their coach and also doubt their coaches’ confidence in them as a result of coaching behaviors that are incompatible with their preferred interaction styles. In short, although an Unfulfilled profile may be somewhat atypical, and contradict theoretical assertions, there are numerous fascinating athlete- and coach-related avenues for investigation to better understand this configuration of tripartite beliefs.

The Unfulfilled profile was also noteworthy in terms of the network of relationship perceptions that accompanied this pattern of self-efficacy, other-efficacy, and
RISE. In particular, despite being relatively self-efficacious, Unfulfilled athletes exhibited commitment and satisfaction scores comparable with Low profile individuals. In line with Lent and Lopez’s (2002) proposals regarding efficacy discordance, analyses also revealed that these athletes perceived higher levels of conflict than any other subgroup. In support, self-verification theorists (Swann, 1983) contend that people generally seek to be seen by significant others in the same light that they see themselves (even if their self-views are negative), and that discrepancies between these two types of appraisal may lead to reduced interpersonal satisfaction, persistence intentions, and emotional attachment (see Swann, in press, for a review). In terms of the tripartite efficacy model, self-verification strivings may explain diminished relationship commitment/satisfaction and increased conflict perceptions when one’s self-efficacy beliefs markedly exceed one’s RISE inferences (e.g., “I’m better than he thinks I am”). In contrast, although consistently low scores across all of the tripartite constructs (i.e., in the Low profile) also aligned with less desirable relationship perceptions, the concordance between self-efficacy and RISE for Low athletes may satisfy their self-verification strivings and help, to an extent, to mitigate conflict perceptions in comparison with those in the Unfulfilled profile.

In future, researchers are encouraged to explore additional psychosocial variables (e.g., burnout, perceptions of social support) along with indices of task functioning (e.g., performance) within Unfulfilled athletes. Self-efficacy plays a pivotal role in facilitating task execution (Moritz, Feltz, Fahrbach, & Mack, 2000), and it would be interesting to explore whether strong self-efficacy beliefs (in isolation) are sufficient to avoid performance decrements, or whether this pattern of tripartite perceptions is also associated with impaired performance effectiveness.

In addition to the future research directions already outlined, this study prompts several further considerations that accompany a number of design limitations. Foremost, it is important to note that we did not assess coaches’ efficacy perceptions. Analyses in previous studies have demonstrated that tripartite effects upon commitment and satisfaction may be more pronounced for subordinate dyad members (i.e., athletes) in this context (Jackson & Beauchamp, 2010; Jackson et al., 2010), supporting our focus on athletes in this study. Nonetheless, it would be interesting in future to also examine the existence of similar (and additional) profiles for coaches, to develop a more comprehensive understanding of coaches’ efficacy beliefs and relationship perceptions. On that note, by recruiting both dyad members, researchers are also encouraged to investigate how one’s tripartite profile may map onto outcomes for the other person in the partnership. For example, do Unfulfilled athletes create an antisocial interaction environment that damages their coaches’ commitment to and satisfaction with their relationship, and evokes greater conflict perceptions on the part of the coach?

Second, despite gaining insight into several important perceptual variables (i.e., conflict, commitment), we did not assess any interpersonal behaviors associated with respective efficacy profiles. Future studies in this area that account for the overt mechanisms that arise out of one’s combination of efficacy beliefs (e.g., communication patterns, support) would be worthwhile. Third, although we largely describe conflict perceptions as undesirable, these data do not indicate whether greater perceptions of conflict actually served to disrupt relationship quality in these dyads. Conflict perceptions did correlate negatively with commitment and both forms of satisfaction (supporting our general assertions), however it has been
shown that conflict, if resolved effectively, may lead to positive relational adaptations and can on occasion promote (rather than undermine) relationship processes (e.g., Fincham & Beach, 1999).

It is important to acknowledge that while athletes in the Low profile actually scored near the midpoint on all efficacy scales, we assigned this cluster name in light of their relatively low scores, not only in relation to other subgroups of athletes in this study but also in comparison with existing tripartite efficacy data (e.g., Jackson & Beauchamp, 2010). Regardless, given that maladaptive efficacy perceptions may impede effective and prolonged interactions, it may be difficult to locate dyads that persist together over-time in the face of genuinely low self-efficacy, other-efficacy, and RISE beliefs. In a similar fashion, as cluster analysis is a data-driven technique, it is important for future research to ascertain how well the current profiles generalize across samples, both in individual as well as team sport settings.

Finally, from a measurement perspective, although these efficacy instruments displayed acceptable psychometric properties for the purpose of this investigation, further validation work is clearly warranted. These scales each comprise a large number of items that assess a variety of physical, technical, and relational factors. As such, future research that seeks to confirm or disconfirm the unidimensional factor structure we observed is encouraged, along with detailed assessment regarding the structural invariance of these measures. In this study, we observed desirable bivariate correlations between efficacy beliefs and theoretically related variables (i.e., commitment, satisfaction, conflict), providing preliminary evidence of the concurrent validity of these efficacy scales. However, further research would also be worthwhile that explores how these instruments map onto other important interpersonal variables (e.g., perceptions of support, accommodative behaviors, overall relationship quality), to examine the nomological properties of these efficacy measures in more detail.

These profiles may have important practical implications for the development and maintenance of effective coach–athlete interaction. Given that the most adaptive relationship perceptions emerged for High efficacy athletes, interventions that draw from the sources of each of the tripartite constructs in this context (see Jackson et al., 2009; Lent & Lopez, 2002) would be encouraged. Indeed, if coaches and practitioners are able to foster athlete efficacy networks characterized by positive, complementary perceptions across Lent and Lopez’s (2002) focal constructs, this approach may hold potential for engendering rewarding interpersonal experiences. On the reverse, the less favorable relationship perceptions associated with Low, and in particular, Unfulfilled (i.e., discordant) efficacy profiles, may provide consultants with important diagnostic information regarding suboptimal relations. Though we cannot deduce causal effects with these data, it is possible that recognizing (and redressing) the formation of Low or Unfulfilled athlete clusters may guard against less adaptive relationship perceptions. In summary, in addition to psychometric advancements (i.e., context-specific instruments) that may stimulate future tripartite efficacy research in this context, this study makes an important conceptual contribution to the growing tripartite efficacy literature. Not only do these findings illustrate the different ways that self-efficacy, other-efficacy, and RISE may align with one another in various individual sports, they also enhance our understanding of key relationship perceptions in coach–athlete settings.
Acknowledgment

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References


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Appendix A: List of Items for the Self-Efficacy and RISE Instruments

1. Perform all the difficult technical aspects of your sport
2. Communicate effectively toward your coach at all times
3. Stay mentally strong during competition
4. Put in all your effort when working with your coach
5. Play an effective role in resolving conflict that arises between you and your coach
6. Stay in optimal physical condition
7. Play a role in devising effective goals
8. Carry out the tasks your coach sets away from practice
9. Play an effective role in maintaining a good relationship with your coach
10. Always be well organized at practice sessions
11. Always carry out your coach’s instructions
12. Perform all the tactical plans set by your coach
13. Consistently reach your coach’s expectations
14. Deal effectively with setbacks in your relationship with your coach

Appendix B: List of Items for the Other-Efficacy Instrument

1. Communicate effectively toward you at all times
2. Always provide you with the support you need
3. Maintain expert knowledge of your sport
4. Play an effective role in resolving conflict that arises between you and him/her
5. Prepare you physically for competition
6. Provide you with enough one-to-one time
7. Play a role in devising effective goals
8. Keep you highly motivated at all times
9. Analyze your performances effectively and give expert direction
10. Prepare you mentally for competition
11. Always be open to your ideas and feelings
12. Always devise effective tactical plans
13. Always make his/her expectations of you clear
14. Put in the effort needed to ensure you progress as an athlete
15. Deal effectively with setbacks in his/her relationship with you